

ABSTRACT

An electronic percussion instrument includes a vibration detection apparatus having a simplified frame structure that increases the uniformity of its rim shot strike sensitivity distribution. The frame is comprised of a flange, a center section and a linking section that surrounds the center section and extends from the center section to the flange. The flange engages the end of the drum body and the frame is disposed within the drum body. A rim shot sensor is mounted to the center section of the frame and detects rim shot vibrations that are transmitted through the frame. Because the linking section of the frame surrounds the center section, uniformity of rim shot strike sensitivity is improved. A head sensor is also mounted to the frame on a support plate that is coupled to the frame through a vibration isolating damper. A cushioning material is placed between the head sensor and a head of the percussion instrument for transmitting vibrations from the head to the head sensor. The flange of the frame and a drum head are held between an end of the drum body and a rim that is bolted to the drum body.